Comparisons of Job Characteristics

Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)
Associated Occupation: Materials Engineers (17-2131)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 74

Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)
Associated Occupation: Materials Engineers (17-2131)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	18.9	17.6	0	Current knowledge level may be sufficient
Chemistry	4.8	15.3	7.8	<<	Extensive education and/or training may be required
Physics	4.3	10.6	12.9	>	Current knowledge level is likely sufficient
Design	5.2	7.9	15.1	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 38

Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)
Associated Occupation: Materials Engineers (17-2131)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	13.0	7.7	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	12.0	11.3	0	Current skill level may be sufficient
Operations Analysis	5.0	11.7	7.2	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)
Associated Occupation: Materials Engineers (17-2131)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Oral Expression	12.4	15.3	12.7	<	Some improvement in abilities may be required
Problem Sensitivity	11.1	14.7	12.6	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	14.2	12.9	<	Some improvement in abilities may be required
Written Comprehension	11.0	14.2	12.7	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	13.9	12.0	<	Some improvement in abilities may be required
Written Expression	9.8	13.8	11.2	<	Some improvement in abilities may be required
Category Flexibility	9.0	11.5	11.0	0	Current ability level may be sufficient
Originality	7.6	10.6	9.2	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	10.2	11.2	0	Current ability level may be sufficient
Number Facility	6.3	9.2	10.2	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 80

Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)
Associated Occupation: Materials Engineers (17-2131)

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Electronic manufacturing and processing machinery	56
Fluid mechanics equipment	11
Holding and positioning and guiding systems and devices	23
Hydraulic presses	25
Indicating and recording instruments	2

Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory centrifuges and accessories	13
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory electron and solid state physics equipment	29
Laboratory enclosures and accessories	17
Laboratory environmental conditioning equipment	24
Laboratory furnaces and accessories	26
Laboratory heating and drying equipment	13
Laboratory ovens and accessories	15
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Machine tools	7
Mechanical instruments	14
Metals and metallurgy and structural materials testing instruments	15
Network applications software	1
Non destructive examination equipment	13
Pneumatic tools	8
Power tools	2
Pressure measuring and control instruments	10
Rough and finishing tools	5
Rubber and plastic processing machinery and equipment and supplies	35
Safety apparel	4
Sound generating and measuring equipment	19
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Water treatment and supply equipment	21
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.